

Appl. No. 11/124,528

Reply to Office Action Mailed 10-31-2006

REMARKS

Claims 1-21 are pending in the application, and shall remain pending upon submission of the present Response and Amendment.

The Office Action indicates an objection to claims 17-21 because of certain informalities. These claims are amended to address the informalities. Withdrawal of the objection is respectfully requested. Claim 1 is amended to correct a typographical error.

Claims 1-21 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,663,199 ("Semmelbeck"). Applicants respectfully traverse this rejection on the basis that Semmelbeck does not teach or suggest several elements recited in independent claim 1.

Claim 1 recites a "method for modeling borehole effects of an induction tool having a plurality of arrays, that includes at least one transverse array." The method according to the invention includes, among other steps, the following:

- selecting a formation-borehole model having a set of parameters, wherein the set of parameters comprises a direction of tool eccentricity; and
- determining the borehole effects from final values of the set of parameters.

Semmelbeck is directed to a method for estimating permeability from multi-array induction logs. The Semmelbeck method appears to combine "a mud cake build-up/invasion simulator or model with a fully implicit near-well bore/reservoir simulator or model, with which radial formation resistivities can be computed and compared with log-observed values." Col. 1, lines 44-48. Although the Semmelbeck method may apply to measurements made by a multi-array induction tool, it is not directed to a method for modeling borehole effects (as is the present invention). Semmelbeck also does not disclose selecting "a formation-borehole model having a set of parameters, wherein the set of parameters comprises a direction of tool eccentricity." The Abstract and portions of columns 1 and 2 of the specification are cited as disclosing this element of claim 1. Nothing in the cited portions suggests, however, that the "direction of tool eccentricity" is included in a set of parameters for a formation-borehole model. Applicants also

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note the absence of "direction of tool eccentricity" from the Table of constants or parameters under columns 4 and 5 of Semmelbeck.

The Abstract and portions of columns 1 and 2 of the specification are again cited as disclosing a step of "determining the borehole effect from final values of the set of parameters." The cited portions do not, however, provide any teachings of determining borehole effects or any suggestion that such a determination could be made.

Accordingly, claims 1-21 are patentable over the Semmelbeck reference. Withdrawal of the outstanding §102(b) rejection is respectfully requested.

In view of the foregoing, the claims pending in the application are believed to be in condition for allowance. The Examiner is respectfully requested to pass the application to issue.

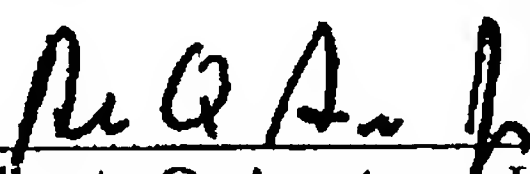
No fee is believed to be due at this time. If the appropriate Petition for an Extension of Time is not attached hereto (or any other Petition required of the application), this statement shall serve as Applicants' Petition to the U.S.P.T.O. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments related to this Response to Deposit Account No. 190610 (20.2903), maintained by Schlumberger Technology Corporation.

The undersigned is available for consultation at any time, if the Examiner believes such consultation may expedite the resolution of any issues.

Respectfully submitted,

Date:

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